

## MILITARY

### Amalgam Virgo

Amalgam Virgo is a joint-service, cruise-missile defense exercise at Tyndall AFB.

Fast, low-flying cruise missiles are hard to detect. To practice their part in defending the U.S. from these missiles, members of the 513th Air Control Group deployed to Florida for the "Amalgam Virgo" cruise missile defense exercise. The multi-service exercise tested the defense and response capabilities to a cruise missile attack on Tyndall Air Force Base, Fla., June 1-4, 2001.

Homeland defense is increasingly being discussed as a primary mission for Guard and Reserve forces. The exercise was coordinated by the Air National Guard's 1st Air Force and involved active duty, National Guard and Reserve forces, the U.S. Navy and Coast Guard as players.

Contributing to the air picture was the Navy Aegis cruiser, USS Yorktown, in the Gulf of Mexico. Equipped with a high-powered radar capable of tracking more than 100 targets simultaneously, the

Yorktown also played a role in the multi-layered defense used to shoot down a cruise missile

Real-time battle management and the transmission of E-3 aircraft sensor information is nothing new to the members of the 513th ACG. Data linking the Airborne Warning and Control System "picture" involves providing continual updates of the battlefield, thereby providing command leadership the needed information to instantly respond to changing conditions. It is crucial that information gathered by the AWACS aircraft be transmitted to the specified command center for rapid analysis and response.

What was perhaps a bit different about this exercise was that it involved U.S. homeland defense and practicing to merge a variety of sister services' capabilities to create a uniform picture and response. There are 75,000 cruise missiles and cruise missile-like aircraft in about 75 countries around the world. Those facts, coupled with the ease with which a cruise missile can be acquired make cruise missile defense a priority. Because of the capability for people with very limited means, in relative terms, to be able to obtain a cruise missile, NORAD has to be very serious about that threat. Key to defending against cruise missiles is making sure all air defenders see the same thing. The goal of this exercise was to improve the air picture and counter new and emerging threats.

The Coast Guard, Navy and U.S. Southern Command, took the lead in detecting, identifying and prosecuting the surrogate terrorist vessel that "launched" the cruise missiles for the exercise. From an air defense point of view, the exercise was a complete success. Twelve drones were launched, and twelve were 'destroyed.' The multi-layered defense structure worked as advertised.

At the heart of the exercise was the Joint-Based Expeditionary Connectivity Center, or JBECC, which 1st Air Force tested as part of its Area Cruise Missile Defense demonstration. Ackermann explained that the JBECC is a highly mobile connectivity shelter, which can be deployed to high-risk areas to provide early warning of a cruise-missile attack. It does this by collecting and correlating radar information from the different services to provide an accurate tracking picture of low-level targets such as cruise missiles.

During the June 2001 exercise Amalgam Virgo, ANZUS, Inc. demonstrated the Rosetta LINK-16 / Link-11 gateway functionality. Tracks and data were forwarded between both links in both directions in real-time. This demonstration served as the pre-certification contractor test which was scheduled for October 2001 at JITC. Additionally, ANZUS demonstrated the JMMTIDS JICO toolset capabilities developed to support the Joint Interface Control Officer in managing a complex combined interface architecture.





